

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A scheduler for scheduling data transmission in a communication system, the scheduler comprising:
 - first logic to determine if each of one or more remote devices corresponding to one or more data transmission indicators has a capacity commitment in an admission profile,
wherein the admission profile is indicative of expected average data requirements for flows already admitted; and
 - second logic to allocate capacity in accordance with a data transmission indicator when a capacity commitment is found, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their before remote devices without capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators in the admission profile.
2. (Canceled)
3. (Currently Amended) The scheduler of claim 1[[2]], wherein the second logic further allocates the remaining capacity, if any, in response to any unsatisfied data transmission indicators in order of increasing size of the unallocated portion of the data transmission indicator.

4. (Original) The scheduler of claim 1, wherein each of a plurality of data transmission indicators is associated with one of a plurality of service levels.
5. (Original) The scheduler of claim 4, wherein the second logic allocates capacity in response to one or more transmission indicators associated with one or more of a first group of service levels in accordance with the admission profile, and allocates remaining capacity, if any, in response to one or more transmission indicators associated with one or more of a second group of service levels.
6. (Original) The scheduler of claim 5, wherein the first group comprises one or more quality of service guaranteed service levels.
7. (Original) The scheduler of claim 5, wherein the second group comprises one or more best effort service levels.
8. (Currently Amended) A communication device, operable with a plurality of remote devices, the communication device comprising:
 - a scheduler for, during each of a plurality of time periods, for each of a plurality of data transmission indicators,
 - determining if a remote device corresponding to the data transmission indicator has a capacity commitment in an admission profile,
 - wherein the admission profile is indicative of expected average data requirements for flows already admitted, and includes the plurality of time periods and a capacity commitment for zero or more remote devices in each of the plurality of time periods, and for
 - allocating capacity in accordance with the data transmission indicator when a capacity commitment is found, wherein capacity is allocated for remote devices with capacity

commitments in the admission profile limited to their before remote devices without capacity
commitments before remaining capacity is allocated to any unsatisfied data transmission
indicators in the admission profile.

9. (Canceled)
10. (Currently Amended) The communication device of claim 8[[9]], wherein the scheduler further allocates the remaining capacity, if any, in response to any unsatisfied data transmission indicators in order of increasing size of the unallocated portion of the data transmission indicator.
11. (Original) The communication device of claim 8, further comprising a receiver for receiving a request message comprising a data transmission indicator.
12. (Original) The communication device of claim 8, further comprising one or more data queues, a data transmission indicator generated with the presence of data within a queue.
13. (Original) The communication device of claim 8, further comprising a transmitter for transmitting one or more grant messages indicating the allocated capacity.
14. (Original) The communication device of claim 8, further comprising an admissions control unit for:
receiving a request for admission comprising flow parameters corresponding to a data flow from a remote device;
conditionally admitting the flow when the flow parameters, if combined with the admission profile, would not exceed the system capacity; and
modifying the admission profile to incorporate the flow upon admission.

15. (Previously Presented) The communication device of claim 8, wherein each remote device corresponds to a plurality of data transmission indicators, each indicator associated with a service level.
16. (Previously Presented) The communication device of claim 15, wherein the scheduler: allocates capacity in response to one or more transmission indicators associated with one or more of a first group of service levels in accordance with the admission profile; and allocates any remaining capacity in response to one or more transmission indicators associated with one or more of a second group of service levels.
17. (Original) The communication device of claim 16, wherein the first group comprises one or more quality of service guaranteed service levels.
18. (Original) The communication device of claim 16, wherein the second group comprises one or more best effort service levels.
19. (Currently Amended) The communication device of claim 15, wherein the scheduler:
~~allocates capacity in response to one or more transmission indicators associated with one or more remote devices having a capacity commitment in the admission profile, the capacity allocated for each remote device limited to the respective capacity commitment;~~
~~then allocates the remaining capacity, if any, in response to unsatisfied transmission indicators associated with a first service level; and~~
~~then allocates remaining capacity, if any, in response to transmission indicators associated with a second service level.~~

20. (Original) The communication device of claim 19, wherein the scheduler further allocates remaining capacity, if any, in response to transmission indicators for data in one or more future time periods associated with the first service level prior to the allocation in response to indicators associated with the second service-level.
21. (Original) The communication device of claim 19, wherein the allocation in response to unsatisfied indicators is performed in order of increasing size of the unallocated portion of the data transmission indicator.
22. (Currently Amended) A communication system comprising:
 - a plurality of remote devices;
 - an admission profile,
 - wherein the admission profile is indicative of expected average data requirements for flows already admitted, and comprises a plurality of time periods and a capacity commitment for zero or more remote devices in each of the plurality of time periods; and
 - a communication device comprising a scheduler for, during each of the plurality of time periods, for each of a plurality of data transmission indicators, determining if a remote device corresponding to the data transmission indicator has a capacity commitment in the admission profile and for allocating capacity in accordance with the data transmission indicator when a capacity commitment is found, wherein capacity is allocated for remote devices with capacity commitments in the admission profile ~~limited to their before remote devices without capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators in the admission profile.~~

23. (Currently Amended) A method for scheduling, comprising:
receiving, at a device with a scheduler, one or more transmission requests from one or more remote devices; and
granting one or more of the transmission requests in accordance with an admission profile,
wherein the admission profile is indicative of expected average data requirements for flows already admitted, and includes a capacity commitment for the one or more remote devices, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their ~~before~~ remote devices ~~without~~ capacity commitments before ~~remaining capacity is allocated to any~~ unsatisfied data transmission indicators ~~in the admission profile~~.
24. (Original) The method of claim 23, further comprising:
receiving a request for admission comprising flow parameters corresponding to a data flow from a remote device;
conditionally admitting the flow when the flow parameters, if combined with the admission profile, would not exceed the system capacity; and
modifying the admission profile to incorporate the flow upon admission.
25. (Currently Amended) A method for scheduling, comprising:
determining, at a device with a scheduler, for each of a plurality of time periods and for each of a plurality of data transmission indicators, whether a remote device corresponding to the data transmission indicator has a capacity commitment in an admission profile,
wherein the admission profile is indicative of expected average data requirements for

flows already admitted; and
allocating capacity in accordance with the data transmission indicator when a capacity commitment is in the admission profile, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their before remote devices without capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators in the admission profile.

26. (Original) The method of claim 25, wherein one or more of the data transmission indicators are received from one or more remote devices.
27. (Original) The method of claim 25, wherein one or more of the data transmission indicators are generated in response to the presence of data within a queue.
28. (Original) The method of claim 25, wherein each of the plurality of data transmission indicators corresponds to one of a plurality of service levels.
29. (Currently Amended) The method of claim 28, wherein capacity is allocated first for data transmission indicators corresponding to a first service level, and the remaining capacity, if any, is allocated to transmission indicators corresponding to one or more second service levels.
30. (Currently Amended) A method for scheduling, comprising:
receiving, at a device with a scheduler, a plurality of transmission indicators corresponding to a plurality of remote devices;
accessing an admissions profile to determine if one or more transmission indicators have an associated commitment in the admissions profile,
wherein the admission profile is indicative of expected average data requirements for

flows already admitted;
allocating capacity according to the remote devices with located commitments limited to their capacity commitments before allocating remaining capacity to any unsatisfied remaining transmission indicators;
allocating remaining capacity to remaining transmission indicators; and
transmitting one or more grant messages in accordance with the capacity allocation.

31. (Currently Amended) A device, comprising:

means for receiving one or more transmission requests from one or more remote devices;
and

means for granting one or more of the transmission requests in accordance with an admission profile,

wherein the admission profile is indicative of expected average data requirements for flows already admitted, and includes a capacity commitment for the one or more remote devices, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their before remote devices without capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators in the admission profile.

32. (Original) The device of claim 31, wherein the admission profile comprises a plurality of frames, and zero or more capacity values associated with a remote device per frame.

33. (Original) The device of claim 31, wherein the admission profile is created in accordance to a duty factor and a frame phase for one or more data flows.

34. (Original) The device of claim 31, further comprising:

means for receiving a request for admission comprising flow parameters corresponding to a data flow from a remote device;
means for conditionally admitting the flow when the flow parameters, if combined with the admission profile, would not exceed the system capacity; and
means for modifying the admission profile to incorporate the flow upon admission.

35. (Currently Amended) A communication system comprising:

means for determining, at a device with a scheduler, for each of a plurality of time periods and for each of a plurality of data transmission indicators, whether a remote device corresponding to the data transmission indicator has a capacity commitment in an admission profile,

wherein the admission profile is indicative of expected average data requirements for flows already admitted; and

means for allocating capacity in accordance with the data transmission indicator when a capacity commitment is in the admission profile, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their before remote devices without capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators in the admission profile.

36. (Currently Amended) A computer-readable medium embodying executable instructions for:

receiving one or more transmission requests from one or more remote devices; and granting one or more of the transmission requests in accordance with an admission profile,

wherein the admission profile is indicative of expected average data requirements for

flows already admitted, and includes a capacity commitment for the one or more remote devices, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their before remote devices without capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators in the admission profile.

37. (Previously Presented) The computer-readable medium of claim 36, further comprising instructions for:

receiving a request for admission comprising flow parameters corresponding to a data flow from a remote device;
conditionally admitting the flow when the flow parameters, if combined with the admission profile, would not exceed the system capacity; and
modifying the admission profile to incorporate the flow upon admission.

38. (Currently Amended) A computer-readable medium embodying executable instructions for:

determining, at a device with a scheduler, for each of a plurality of time periods and for each of a plurality of data transmission indicators, whether a remote device corresponding to the data transmission indicator has a capacity commitment in an admission profile,
wherein the admission profile is indicative of expected average data requirements for flows already admitted; and

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allocating capacity in accordance with the data transmission indicator when a capacity commitment is in the admission profile, wherein capacity is allocated for remote devices with capacity commitments in the admission profile limited to their before remote devices without capacity commitments before remaining capacity is allocated to any unsatisfied data transmission indicators in the admission profile.

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